

# Manufacturing Market™ INSIDER

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## MMI Releases 2009 Top 50

### Hon Hai buffers sales decline

The results are in from *MMI's* annual survey to identify the world's Top 50 EMS providers. Providers who made the *MMI* Top 50™ appear in the standings on pages 2-4. Although the global recession led to a loss of EMS industry sales last year, it also resulted in a lowering of the bar for admission to the Top 50. For the first time since 2005, a provider could make the Top 50 with less than \$200 million in sales (Chart 1). The Top 50 cutoff for 2009 was revenue of \$190 million, down from the prior year's minimum of \$209 million.

Lowered demand across the board last year dragged annual sales downward for the vast majority of the Top 50. Of the 49 Top 50 providers that reported sales for 2009 and 2008, 43 of them experienced revenue declines last year. What's more, 17 providers saw decreases of 20% or more. It should then come as no surprise that combined sales for the 49 providers were down by double digits in 2009. (One provider, **SRI**, did not report 2008 sales because it was part of **Nokia Siemens Networks** for most of 2008). Aggregate revenue for the 49 Top 50 providers fell by 14.9%. Sales for the 49 totaled \$134.1 billion for 2009, down from \$157.6 billion the year before.

Top-10 performance wasn't much different. Together, the ten largest

EMS providers produced a sales decline of 15.0%. Of course, this makes sense when you realize that the top 10's sales of \$117.7 billion represented 88% of the Top 50 total in 2009. The top 10's share of the total remained unchanged from 2008.

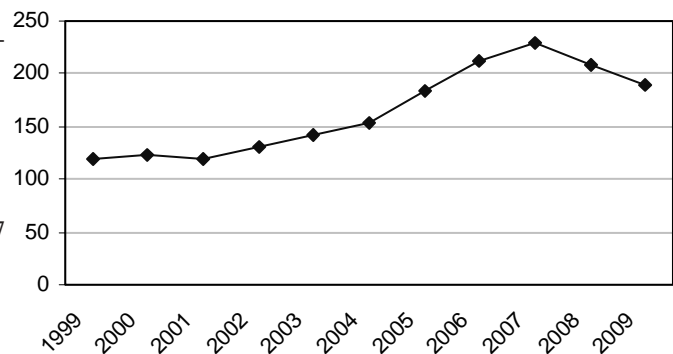
While a 14.9% decline is by far the worst outcome in the 14 years that *MMI* has been compiling Top 50 lists, the result could have been even more unpleasant were it not for the contribution of **Hon Hai Precision Industry** (also known as Foxconn). *MMI* estimated Hon Hai's 2009 sales to be \$59.3 billion (the company's consolidated results were not published at press time.) Based on this estimate, Hon Hai's sales were only down by 4% in U.S. dollars. As *MMI* has point-

ed out in the past, Hon Hai's size gives the company an ability to influence Top 50 results. The modest decline in Hon Hai's sales acted to buffer the Top 50's overall revenue drop. If Hon Hai were omitted from the Top 50, sales would have fallen by 21.8% for the 48 providers reporting sales for both years. Hon Hai's effect was to erase 6.9 percentage points from the overall decline (Chart 2, p. 4).

Last year's sales for all 50 providers added up to \$134.4 billion, well

*continued on p. 4*

Chart 1: Top 50 Cutoff (Millions USD)



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# MMI Top 50

The MMI Top 50 EMS Providers in 2009												
Organization	Head-quarters	Sales calendar 2009 (millions)	Rank by 2009 sales	Rank by 2008 sales	Sales calendar 2008 (millions)	Growth '08-'09 in US\$ (%)	No. of people	No. of plants	Total facility sq. ft.	Percent space in low-cost regions	No. SMT lines	No. of customers and notable customers
Hon Hai Precision Industry (Foxconn)	Tucheng City, Taiwan	\$59,300 (estimated)	1	1	\$61,879	-4	~700,000 (estimated)	not avail.	not avail.	not avail.	not avail.	Dell, Apple, HP, Motorola, Cisco, Sony Ericsson, Amazon
Flextronics International	Singapore	\$23,754	2	2	\$33,141	-28	160,000	not avail.	not avail.	71	not avail.	Casio Hitachi, Cisco, Ericsson, Huawei, HP, Microsoft, Nortel, RIM, Sony Ericsson, Sun
Jabil Circuit	St. Petersburg, FL	\$10,962	3	3	\$12,113	-10	85,000	~50 sites	~22 M <sup>1</sup>	75	not avail.	Cisco, HP, RIM, Nokia Siemens Networks, BP Solar, SunPower, Zebra Technologies
Celestica	Toronto, Canada	\$6,092	4	4	\$7,678	-21	>30,000	22 <sup>2</sup>	7.5 M	~80	not avail.	>100: Alcatel-Lucent, Cisco, EMC, HP, Honeywell, IBM, Juniper, NEC, Raytheon, RIM, Sun
Sanmina-SCI	San Jose, CA	\$5,237	5	5	\$6,844	-23	38,000	not avail.	not avail.	64	not avail.	JDSU, UTStarcom, Dish Network
New Kinpo Group	Taipei, Taiwan	\$4,200	6	7	\$4,700	-11	25,000	18	not avail.	not avail.	140	HP, Thomson, Pace, Seagate, WD, Sony, Casio, Motorola
Venture	Singapore	\$2,343	7	8	\$2,679	-13	>14,000	not avail.	not avail.	not avail.	not avail.	147: Agilent, HP, IBM, Intermec, NCR, Micros, Radiant, Hypercom
Elcoteq	Luxembourg	\$2,140 (estimated)	8	6	\$5,070	-58	~11,000	9	~1.96 M	100 (mfg.)	not avail.	Nokia, Immarsat, EADS, Ericsson, Funai, Huawei, Philips, RIM, Sony Ericsson, Thomson, Humax
Benchmark Electronics	Angleton, TX	\$2,089	9	9	\$2,590	-19	~9,800	24	3.09 M	~40	~130	~100: Emerson, IBM, Medtronic, Sun, JDSU
Plexus	Neenah, WI	\$1,591	10	11	\$1,840	-14	7,169	17	2.25 M	44	74	~135: Juniper, GE, Coca-Cola, QIAGEN
Universal Scientific Industrial (USI)	Nantou, Taiwan	\$1,563	11	10	\$2,062	-24	11,132	5	2.59 M	58	114	110 (EMS)
Beyonics Technology	Singapore	\$1,028	12	14	\$886	16	6,000	9	1 M	40	not avail.	
SIIX	Osaka, Japan	\$865	13	13	\$897	-4	6,082	4 <sup>3</sup>	697 K <sup>3</sup>	not avail.	80	200
Zollner Elektronik	Zandt, Germany	~\$850	14	12	\$1,050	-19	6,700	14	2.66 M	54	40	500
UMC Electronics	Saitama, Japan	\$831	15	15	\$633 <sup>4</sup>	31	7,300	6	809 K	90	111	
Sumitronics	Tokyo, Japan	\$810	16	new	\$1,150	-30	~2,000	4 <sup>5</sup>	not avail.	not avail.	140	~50
Kimball Electronics Group	Jasper, IN	\$629	17	16	\$727	-13	3,139	8	1.04 M	52	37	>20: Water Optimizer, FLIR Systems, Draeger, Grundfos
Orient Semiconductor Electronics	Kaohsiung, Taiwan	\$619	18	21	\$538	15	4,850	5	491 K	93	69	45
AsteelFlash Group	Paris, France	\$490	19	19	\$584	-16	3,935	19	1.05 M	33	43	>200: Alcatel-Lucent, Brocade, Bull, Cooper, Fagor, H3C, Tellabs, Thales
Alco Electronics	Hong Kong	\$463	20	22	\$510	-9	6,500	5	2.3 M	100	116	10: Wal-Mart, Target, Shopko, K-Mart, Forest River, Winegard
Nam Tai Electronics	Shenzhen, China	\$408 <sup>6</sup>	21	18	\$623 <sup>6</sup>	-34	5,203	4	1.06 M	100	not avail.	Sharp, Epson Imaging Devices, TI, GN Netcom, Sony, Sony Ericsson

Note: Unless otherwise indicated, data represents 2009 year-end. <sup>1</sup> As of Aug. 31, 2009. <sup>2</sup> Includes manufacturing, services sites and offices.

<sup>3</sup> Excludes facilities of SIIX affiliates. <sup>4</sup> Original 2008 figure provided by the company was higher. <sup>5</sup> Does not include 26 partner plants.

<sup>6</sup> Includes LCD business.

The MMI Top 50 EMS Providers in 2009

Organization	Head-quarters	Sales calendar 2009 (millions)	Rank by 2009 sales	Rank by 2008 sales	Sales calendar 2008 (millions)	Growth '08-'09 in US\$ (%)	No. of people	No. of plants	Total facility sq. ft.	Percent space in low-cost regions	No. SMT lines	No. of customers and notable customers
3CEMS Group	Guangzhou, China	\$402	22	24	\$477	-16	10,000	7	2.27 M	not avail.	44	261: HP, Asustek, Nintendo, Flextronics, Pioneer, Delta, Foxconn, Canon, Sony, Honeywell, Samsung
VIDEOTON Holding	Székesfehérvár, Hungary	\$400	23	25	\$470	-15	5,900	11 (9 active)	5.9 M	100	27	>50: Braun, Philips, Sagem, Delta, Bosch, Continental, Denso, NCR, Johnson Electric, Sensata, Valeo, Visteon, ABB, Actaris, Alstom, HP, Ametek, Carrier, Eaton, Emerson Electric, Sensus, Siemens, GE
Integrated Micro-Electronics, Inc.	Laguna, Philippines	\$396	24	27	\$441	-10	12,990	10 sites	1.87 M	99	>110	>100
Fabrinet	Singapore	\$379	25	20	\$543	-30	~4,700	4 sites	~1.1 M	98	15	JDSU, Oclaro, Finisar, Opnext, Emcore, Coherent, Newport, Infinera
Enics	Zürich, Switzerland	\$378	26	23	\$501	-25	2,300	7	648 K	40	not avail.	ABB, Atlas Copco, Bombardier, Danfoss, Gambro, Honeywell, KONE, Landis+Gyr, Leica, Roche Diagnostics, Schneider Electric, Vaisala, Varian Medical
Creation Technologies	Burnaby, BC, Canada	\$358	27	31	\$392	-9	2,100	11	568 K	6	30	~190
SRI Radio Systems	Durach, Germany	\$310	28-	new 29	not applic. <sup>7</sup>	not applic.	460	1	not avail.	0	5	34: Nokia Siemens Networks
WKK Technology	Hong Kong	\$310	28-	32- 29 34	\$315 <sup>8</sup>	-2	4,500	1	725 K	100	27	30
Wong's Electronics	Hong Kong	\$308	30	28	\$413	-25	>4,900	3	893 K	100	>50	>20
Topscom Technology	Hong Kong	\$300	31	45	\$260	15	4,360	3 <sup>9</sup>	969 K	not avail.	86	122
CTS Electronics Manufacturing Solutions	Bloomington, IL	\$285	32	30	\$399	-29	1,557	7	467 K	~30	not avail.	>95: Thales, Aviation Communication & Surveillance Systems, Coulomb Technologies, Barron McCann Technology
PartnerTech	Vellinge, Sweden	\$280	33	32- 34	\$380	-26	1,382	9	800 K	10	9	>200: Opcon, Tomra, Biotage
Kitron	Billingsstad, Norway	\$275	34-	29 35	\$375 <sup>8</sup>	-27	1,121	not avail.	not avail.	not avail.	not avail.	ABB Robotics, Danaher Motion, GE Vingmed, Kongsberg, Laerdal, Lockheed Martin Maritime
Scanfil	Sievi, Finland	\$275	34-	36 35	\$322	-15	2,061	6	1.18 M	~65	not avail.	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, UTStarcom, ABB, KONE, Metso, Vacon, Vaisala, Teleste
LaBarge	St. Louis, MO	\$269	36	38	\$290	-7	1,462	11	603 K	0	10	175: Northrop Grumman, BAE Systems, Sikorsky Aircraft, Raytheon, Kaman Aerospace
VTech Communications	Hong Kong	\$263	37	43- 44	\$268	-2	3,500	1	450 K	100	12	65
Neways Electronics International	Son, The Netherlands	\$262	38	35	\$357	-27	1,772	12	not avail.	40	19	~600: ASML, FEI, Philips, Rhein Metal, ThyssenKrupp
EPIC Technologies	Norwalk, OH	\$258	39	40	\$283	-9	2,100	4	300 K	65	18	23

Note: Unless otherwise indicated, data represents 2009 year-end. <sup>7</sup> SRI was part of Nokia Siemens Networks until December 2008; 2009 sales are not comparable with 2008 sales. <sup>8</sup> Original 2008 figure provided by the company was higher. <sup>9</sup> Includes one plant under construction.

# MMI Top 50

The MMI Top 50 EMS Providers in 2009												
Organization	Head-quarters	Sales calendar 2009 (millions)	Rank by 2009 sales	Rank by 2008 sales	Sales calendar 2008 (millions)	Growth '08-'09 in US\$ (%)	No. of people	No. of plants	Total facility sq. ft.	Percent space in low-cost regions	No. SMT lines	No. of customers and notable customers
Selcom Elettronica	Bologna, Italy	\$249	40	new	\$307	-19	1,841	7	538 K	20	16	70: Bosch und Siemens Hausgeraete, Electrolux, KONE Elevators, GD, Fagor Brandt, Gambro, Denso, Sanyo Energy
DRS Technologies	Parsippany, NJ	\$242	41	43-44	\$268	-10	1,326	4	441 K	0	3	75: Lockheed Martin, BAE, GDC4S, ITT, Boeing, SAIC, Raytheon, U.S. Government
OnCore Manufacturing	San Jose, CA	\$241	42	new	\$245	-2	1,025	5	300 K	20	not avail.	
EN ElectronicNetwork	Limburg, Germany	\$232	43	41	\$274	-15	850	4	330 K	0 <sup>10</sup>	10	>200
EPIQ	Tessenderlo, Belgium	\$229	44	39	\$288	-20	2,773	5	350 K	70	22	35
Hana Micro-electronics	Bangkok, Thailand	\$227	45	37	\$249 <sup>11</sup>	-9	5,500	2	540 K	100	81	~145
BreconRidge	Ottawa, Canada	\$225	46	42	\$219 <sup>11</sup>	3	1,200	3	621 K	36	12	32: Mitel, Nortel, Thales, GE, Catch the Wind
Surface Mount Technology (Holdings) Limited	Hong Kong	\$223	47	32-34	\$380	-41	>6,500	4	~1.2 M	100	152	
EOLANE	Le Fresne sur Loire, France	\$220	48	new	\$189	16	1,450	8	560 K	15	21	400: Thales, Safran, EADS, Valeo, Alstom, Schlumberger, Sercel, France Telecom, SFR, Atlas Copco, Areva, DGA, Somfy, Fukuda, Esoate, PSA, Renault, Mentor
V.S. Industry	Senai, Malaysia	\$196	49	47	\$254	-23	2,817	8	1.15 M	100	35	54: Dyson, Actaris, Valeo Thermal Systems JPN, Panasonic, Samsung
SVI	Pakkred, Nonthaburi, Thailand	\$190	50	new	\$215	-12	not avail.	4	not avail.	100	not avail.	

Note: Unless otherwise indicated, data represents 2009 year-end. <sup>10</sup> Does not include space available from partner's low-cost site. <sup>11</sup> Original 2008 figure provided by the company was higher.

below the \$158.5 billion in revenue generated by the 2008 group. Hon Hai's estimated share of 2009 Top 50 sales was 44%, up from 39% for 2008.

Like the Top 50, the top-ten list was easier to make in 2009 than in 2008. The top ten in 2009 required minimum sales of \$1.59 billion, which was \$470 million lower than the 2008 cutoff. Benefiting from this easing of the entrance requirement, **Plexus** cracked the top ten for the first time.

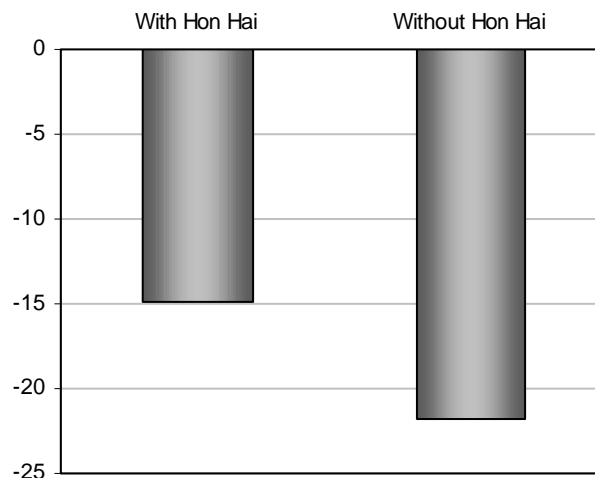
The company's move up into tenth position was not the only change in the top 10 order. Although the occupants of the first five spots remained the same as in 2008, **New Kinpo Group**

and **Venture** each rose one step in the order to sixth and seventh place respectively. **Elcoteq** dropped two positions to number eight, while **Benchmark Electronics** continued to rank ninth.

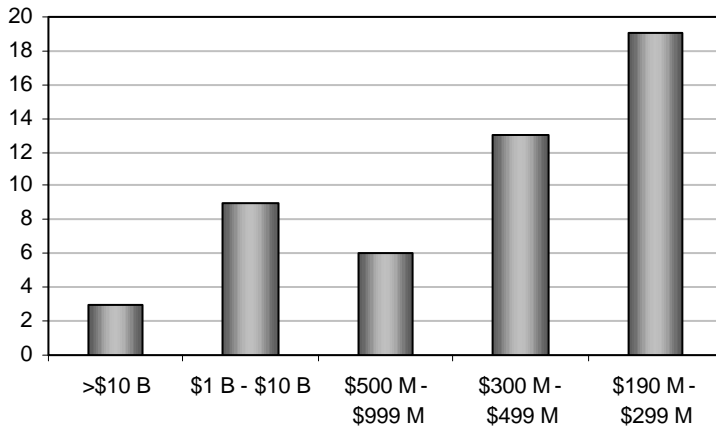
Making the greatest advance in the 2009 standings was Hong Kong-based **Topscom Technology**, which went from 45th place in 2008 to 31st in 2009.

Six EMS providers joined the *MMI* Top 50

Chart 2: 2009 Growth of 49 Top 50 EMS Providers



**Chart 3: Distribution of Top 50 Providers by 2009 Sales**



for the first time. Three newcomers are European companies, namely France's **EOLANE** (48th), Italy-based **Selcom Elettronica** (40th) and Germany's **SRI Radio Systems** (tied at 28th/29th). Two others are Asia-based – **Sumitronics** (16th) of Japan and **SVI** (50th) of Thailand. The final addition is a North American provider, **On-Core Manufacturing** (42nd), headquartered in California.

Of the six companies that came off the list, three did so because of sales declines. In two other cases, *MMI* was unable to obtain sufficient data for consideration. A sixth company now reports its EMS sales as a segment of total revenue.

Within the Top 50, the largest numbers of providers lie toward the low end of the standings, as you might expect (Chart 3). A majority of the Top 50 – 32 providers to be exact – listed 2009 sales under \$500 million. Furthermore, 17 companies were bunched between \$220 million and \$285 million. Within this range, there were eight instances where the difference between one rank and the next was \$3 million or less.

But this inverse relationship between sales and numbers of companies is apparently not an ironclad rule. More providers had sales between \$1 billion and \$10 billion than had sales between \$500 million and \$999 mil-

lion (Chart 3).

Seven companies participating in the Top 50 survey listed 2009 revenue that was below the Top 50 cutoff. They appear in the table below.

As in past years, Top 50 data yielded two productivity ratios. Employee counts for 49 companies totaled 1.24 million people, of which Hon Hai's work force represented an estimated 57%. Revenue per employee for these 49 providers works out to \$108,700. But because Hon Hai's worker total is so large – *MMI* estimated about 700,000 – yet cannot be verified, it is prudent to calculate the ratio without Hon Hai. With Hon Hai excluded, revenue per employee increases to

Other Participants in the Top 50 Survey		
Organization	Headquarters	Sales 2009 (millions)
SMTC	Markham, Ont., Canada	\$180
KeyTronicEMS	Spokane Valley, WA	\$176
Connect Group	Kampenhout, Belgium	\$164
NOTE	Danderyd, Sweden	\$157
ESCATEC	Penang, Malaysia	\$153
Simclar (Group), Ltd.	Dunfermline, Scotland	\$111
Sparton Electronics	Brooksville, FL	\$86

\$140,000. That's 20% lower than the 2008 ratio of \$175,000, which was based on 46 companies and excluded Hon Hai.

The other ratio, revenue per square foot, was calculated from a group of 39 providers that supplied facility space data. Their facilities on average generated \$541 of revenue per square foot. This 2009 ratio is 28% below the 2008 average of \$753, which was derived from 41 providers. Note that 2009 ratios are approximate: they incorporate some data that are imprecise.

*Methodology.* Providers were ranked based on calendar 2009 sales in U.S. dollars. Where information was not publicly available, *MMI* depended on companies to provide accurate data. Companies were asked to convert sales in non-U.S. currencies into U.S. dollars by using an average annual exchange rate corresponding to the sales year. Where possible, sales of non-EMS businesses were excluded. In some instances where EMS providers also do ODM work, ODM sales were mixed into the reported revenue.

## World Markets

### *Hon Hai Said To Be Resuming Vietnam Investment*

So far, **Hon Hai Precision Industry** (Tucheng City, Taiwan), also known as Foxconn, has relatively little to show for its \$5-billion development plan for Vietnam, announced over two and a half years ago (see also Jan., p. 5-6). After opening two factories in Bac Ninh province in 2007, Hon Hai did not continue adding capacity in Vietnam. One can imagine that the global recession interfered with Hon Hai's plan for the country. Now that demand is returning, there are signs that Hon Hai is restarting the flow of investment into Vietnam.

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• Hon Hai's mobile-phone subsidiary, **Foxconn International Holdings**, will begin construction of a \$200-million handset plant in Vinh Phuc province during the second quarter, according to various reports. In early 2009, a Foxconn subsidiary received a license for this operation, located in the Binh Xuyen II Urban Industrial Zone. (The January edition on p. 6 mistakenly reported that the license was granted in 2010.) Reportedly, the plant will have the capacity to produce 89 million cell phones a year.

• Published reports say Hon Hai Group and a Vietnamese company, **Kinh Bac Urban Development**, plan to jointly invest \$200 million in infrastructure for a complex in the port of Hai Phong. Reportedly, the complex will consist of a 300-ha industrial site, a 360-ha urban area, and a golf course. Two recent reports indicate that work on this project will start in second half of the year.

• Hon Hai intends to restart construction of an industrial park in Bac Giang province during the first quarter, reported *Intellasia*. The Van Trung Industrial park includes a 442-ha industrial zone along with commercial and urban areas and golf, according to a local government website. Reportedly, the company will locate two factories in Bac Giang.

Hon Hai's plan encompasses at least six areas in Vietnam: Bac Giang, Bac Ninh and Vinh Phuc provinces and the city of Hai Phong, as identified here, plus Binh Dinh province and Ho Chi Minh City. The company's blueprint is to develop new towns or urban areas along with industrial parks. Hon Hai has signed agreements with officials in all of these locations, if past reports are accurate. In addition, the company reportedly wants to set up a border trade zone in Lang Son province, which would be a seventh area covered by the plan. The cities of Danang and Hanoi have appeared in some reports, but *MMI* was unable to find

any instances of Hon Hai signing agreements with either municipality.

But Hon Hai is not the only contract manufacturer resuming its investment in Vietnam. **Compal Electronics**, which had begun construction of a notebook factory in Vinh Phuc province in 2007, will restart work on the project, according to *CENS.com*. But *Digitimes* reported that the plant will not be operational until year-end or the start of 2011.

Key to the development of an EMS industry in Vietnam is the emergence of a local supply base. OEM factories can also contribute to the growth of a local supply base because they often bring their suppliers with them. A case in point is **Samsung**, which opened a mobile-phone plant in Bac Ninh province last year. Reportedly, Samsung plans to increase the plant's capacity to 100 million phones a year, which would make the plant Samsung's second largest cell-phone factory.

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## News

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### **Flextronics Going Big in Solar**

**Flextronics** (Singapore) has dedicated one million ft<sup>2</sup> to create a clean tech super site at its existing facility in Port of Tanjung Pelepas, Malaysia. With a range of solar module production services already operational at PTP, Flextronics' development plans include increasing site capacity to support one gigawatt of solar module production over the next two years.

"Malaysia is the ideal location for our clean tech super site because of customer proximity and established wafer and cell operations in the area," stated E.C. Sykes, president of Flextronics Industrial.

### **Providers pursuing a variety of clean tech niches**

Solar modules aren't the only clean tech niche where a provider made

news in recent weeks. Clean tech encompasses a number of growing product areas that in some cases have little in common other than serving the greater good of the planet.

The first announcement is a solar business win, but the new business does not consist of assembling solar modules. **SolarEdge Technologies** (Hod Hasharon, Israel) has selected Flextronics as its global manufacturing partner for high-volume production of SolarEdge's distributed PV (photovoltaic) power harvesting and monitoring systems. The two companies worked together for six months on preparing dedicated production lines at Flextronics. Manufacturing started during last quarter and is expected to reach an annual capacity of 200 megawatts. Flextronics said it is prepared to leverage its global resources including production and logistics facilities in Mexico, Hungary and China to support SolarEdge's future growth. SolarEdge's DC-DC power optimizers are embedded into PV panels to increase their power output and provide panel monitoring.

**Hon Hai Precision Industry** (Tucheng City, Taiwan) is also in the hunt for solar business. But Hon Hai has recently taken aim at a different slice of the solar sector. The company plans to erect a facility to produce solar battery modules in Taiwan's Miaoli County, reported *CENS.com*.

Energy-efficient lighting serves as another clean tech niche from which EMS business is being mined. **Philips Lighting** has chosen **Elcoteq** (Luxembourg) as a global partner for its Solid-State Lighting business. Under this contract, Elcoteq will provide Philips Lighting with global manufacturing services and related sourcing and supply chain management as well as product development services. Elcoteq has already started production of SSL products in its factory in Dongguan, China. Production will expand to other Elcoteq locations including Mexico

and Hungary during the year.

This win marks Elcoteq's entrance into solid-state lighting, a new fast-growing market segment. The lighting business will be undergoing significant transition when new LED-based lighting products replace conventional light sources, as has been stated here before (Jan., p. 5). These new lighting product applications provide significant growth opportunities for EMS companies, Elcoteq confirms. The value of LED-based lighting products is estimated to reach 80 billion euros by 2020.

But Elcoteq is not the only provider to land LED lighting business. Last year, for example, **Cree** (Durham, NC) disclosed that it had outsourced LED lighting products to Flextronics (Oct. 2009, p. 5).

Still another niche, wind energy systems, presents a bit of a mystery in that its connections to the EMS industry remain largely shrouded. Yet to some degree, the wind industry has been a source of EMS business. Take the **Matric Group** (Seneca, PA), which operates two EMS companies. Matric has been supplying blade pitch control systems for wind turbines to **MLS ElectroSystem** (Coraopolis, PA), a pitch control OEM founded by Matric and two other companies. Recently, Matric and engineering firm **R2J Technologies** (Pittsburgh, PA), another MLS founder, acquired controlling interests of MLS, which was renamed **Windurance**.

*More new business...* Hon Hai will build Blu-ray disc players for **Panasonic**, according to an online report by *China Knowledge*, which referenced the *Commercial Times*, a Chinese-language newspaper. *CENS.com* reported that Hon Hai has entered the Blue-ray disc-drive business, and a Hon Hai affiliate, **Sheentec**, is designing new Blue-ray drives. In addition, **Sony** has increased the number of notebooks ordered from Hon Hai to two million,

according to *Digitimes*, which also cited the *Commercial Times*....**Research in Motion** has contracted Flextronics to produce a model of the BlackBerry Curve smartphone in Brazil, a RIM executive recently told *Reuters*....**Sypris Electronics** (Tampa, FL), a subsidiary of **Sypris Solutions**, has received an estimated \$6 million in follow-on orders from **Honeywell's** Defense and Space Electronics Systems (Albuquerque, NM) for production of electronic assemblies used in the F-16 flight control computer. Also, **Northrop Grumman Information Systems** has awarded Sypris Electronics follow-on orders to provide electronic assemblies for the communications, navigation and identification avionics system used in the F-35 Joint Strike Fighter program. These additional orders bring the program total to about \$10 million since the company's initial award in 2005....**Express Manufacturing, Inc.** (Santa Clara, CA) is building the DashTrak, a wearable device developed by **WalkStyles** that helps users keep track of how many steps they walk in a day.

*Denies reporting of TV business won...* Hon Hai has said it is untrue that the company received orders to assemble 5 million LCD TVs for **Samsung**. A report to this effect appeared here last month (Feb., p. 7).

*Alliance...* Engineering firm **DGE** (Rochester Hills, MI) and EMS provider **InvoTronics** (Scarborough, Ontario, Canada) have formed an alliance. DGE will provide electronics hardware and software design services, including test system development, in combination with InvoTronics' manufacturing services.

*Technology alliances...* **AuthenTec** (Melbourne, FL), a provider of smart fingerprint sensors and solutions, and **Jabil Circuit** (St. Petersburg, FL)

have signed a joint development agreement for the mobile phone market. The partners' first mobile solution is the Smart Navi-Key, a keypad that incorporates AuthenTec's smart sensor technology....**Benchmark Electronics** (Angleton, TX) has joined the **Texas Instruments** Elite Design House Network, a small group of independent companies offering system-level design and other services.

### *Expansion in N. America*

**IPC** (Bannockburn, IL), a trade association, recently reported that one-third of the 58 companies participating in its North American EMS statistical program indicated that they will very likely or definitely add assembly capacity in 2010. By comparison, last year only 17% of participants indicated intent to expand.

*Factory projects...* Hon Hai intends to set up a completely automated factory in Taiwan, *Digitimes* reported. ...In Tallinn, Estonia, Elcoteq has opened a new 4,200-m<sup>2</sup> plant. The provider decided to move to a larger facility there in order to accommodate **Inmarsat**, a new customer (Feb., p. 7-8). Elcoteq is concentrating on high-mix, low-volume production in Tallinn after selling the majority of its Tallinn operations to **Ericsson** (June 2009, p. 1-2)....**ACW Technology**, an EMS company based in Southampton, UK, is setting up its first manufacturing facility in the U.S. In Q2, ACW will open a 30,000-ft<sup>2</sup> facility in Durham, NC....EMS provider **Spectral Response** of Duluth, GA, is investing almost \$2 million to increase its footprint by 40%, according to a report posted by the local chamber of commerce. The provider will combine its operations into a new 72,000-ft<sup>2</sup> facility in Lawrenceville, GA, the *Atlanta Business Chronicle* reported. Spectral will remain in Gwinnett County, Metro Atlanta, GA.

## Risky Business

Nobody ever said that outsourcing is a risk-free activity. While risk is hard to quantify, it can have a powerful effect on people, especially when it's perceived to be increasing. The EMS industry is facing one of those periods of greater risk, in this case stemming from the supply chain.

Capacity cutbacks during the recession have resulted in the stretched lead times and parts shortages that EMS providers and their customers are contending with. There is a greater chance that a customer's product won't ship on time due to a lack of parts.

Let's not beat around the bush: Increased risk scares folks. OEM operations people do not want fingers pointed at them for missing (end) customer deliveries. Job security worries, normally in the back of people's minds, come to the forefront when supply chain risks start growing. Likewise, EMS program managers don't want their OEM accounts blaming them for shipments held up for a want of components.

Fear, unfortunately, can lead people to make decisions that have unintended consequences. The classic case occurred prior to the dot-com bust when component buyers were routinely double ordering parts to keep up with what at the time appeared to be an almost

insatiable demand. Individually, these buyers were doing the right thing. They were taking steps to ensure parts supplies for their EMS or OEM organization. But collectively, they were overloading supply chains with parts, which would eventually come back to haunt OEMs and EMS providers when the bubble burst.

Chastened by this experience, EMS providers are leery of ordering parts ahead of forecasts. While providers are being more prudent this time around, they still have to deal with component scarcities. One approach to this dilemma is to get OEM customers to commit to longer forecasts that allow parts to be ordered farther in advance of shipment dates. This work-around isn't perfect but it makes more sense than double ordering.

Another supply chain risk recently reared its ugly head in China. After workers went home for the Chinese New Year, there were reports of a massive labor shortage in China's coastal cities. It is unclear whether the labor shortfall will be long lasting or will be resolved by higher wages. In any event, it's unsettling. China is critical to many supply chains.

The concern isn't so much with EMS providers who have experience dealing with labor shortages in China. Rather, OEMs worry about their providers' suppliers or suppliers further

down the chain who might not have the clout and resources to overcome a labor shortage. A labor shortage at one node in a supply chain can disrupt the entire chain.

While these increased risks can be nerve-racking, OEMs and their providers can jointly anticipate and plan for them. For example, a disruption in one part of the world can be offset by production from another region. That's the best way to keep fear and the panicky-decision making that results from it at bay.

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